

by one in depth. The remainder of the brain and all its blood-vessels appeared to be healthy.

Thorax.—The pericardium contained about a tea-spoonful of serum; it appeared healthy. The heart was soft, flabby, and could be torn with great ease. In the right cavities, we found liquid blood of a livid colour, without fibrinous clots. In the left cavities, the blood was similar, but there were some small fibrinous coagula. The inferior vena cava contained liquid blood, of the colour of wine lees. The internal membrane was slightly reddened. (A post mortem change.) The lungs were crepitant throughout, but their tissue could be readily torn, especially the posterior portions, where they were filled with a blackish, spumous, and as if purulent liquid. This fluid, or this blood, existed in large quantities in both lungs. No alteration in the bronchi.

Abdomen.—The mucous membrane was not softened, presented a very abundant secretion of mucus. It had a yellow tint over most of its surface, but with here and there brown, livid patches, especially at the greater curvature of the stomach. Between the valves of the stomach, and on the mucous membrane, we collected a great number of small fragments of a vitreous substance, which analysis proved to be arsenic; there was more than twenty grains of it.

Three lumbrici were found in the small intestines. The mucous membrane was not softened, but strongly injected in several spots of three or four inches in extent. The follicles of Brunner were very numerous, especially towards the ileo-cæcal valve and duodenum. The large intestine was also the seat of a violent inflammation in several spots, and was filled with a large quantity of fluid. Its mucous membrane swelled, and near the ileo-cæcal valve, it formed a kind of polypus. The bladder contained about two spoonfuls of a turbid and as if purulent fluid. Its mucous membrane was highly injected. The tissue of the kidneys appeared healthy, except that it contained a fluid analogous to that in the lungs. The spleen was softened, of the colour of wine lees, its tissue easily torn. The liver was large, a little injected, without any other visible alteration. The pancreas was healthy. The mesentery contained about thirty glands as large as a bean, none of which were softened or suppurated. The great sympathetic nerves were injected.

Observations.—This is certainly one of the most violent cases of poisoning that could be met with, and nevertheless the countenance gave no indications. The digestive canal was the seat of the highest inflammation, and yet the patient complained of no pain, even when great pressure was exercised on the abdomen.

In the post mortem examination, there was every where found the altered, black blood, so often seen in cholera patients. The urinary secretion had ceased, and nothing was found in the bladder except a white, milky fluid. We should also remark, that the alteration of the brain which was found after death, was not suspected during life. Nevertheless, the quantity of arsenic collected from the stomach, and in small fragments weighing many grains, does not permit us to doubt, but that the death was owing to suicide. Was this in consequence of the cerebral alteration? We cannot prove it, but we think that suicide is an evident proof of an alteration of the brain.—*Journal Universel et Helvétique. Sept. 1832.*

The above case is interesting not only in a medico-legal point of view, but also from its striking similarity to malignant cholera, and as thus furnishing evidence of the great analogy between the action of the cause, whatever it may be, productive of cholera, and arsenic, an agent whose action is acknowledged to be that of an irritant to the gastro-intestinal mucous membrane.

CHOLERA.

36. *Spontaneous Origin of Cholera, and on the liability of Insane persons to this Disease.*—The statement of M. Esquirol, as to the exemption of insane persons from cholera attacks, is, according to the editor of our cotemporary, the *London*

Medical and Surgical Journal, not verified in London. "At the Bethnal-green lunatic establishments, called the "Red House," and "White House," Dr. Ryan says, that "upwards of one hundred cases of cholera have occurred since the 10th of June last. The history of the progress of cholera in these establishments is highly illustrative of the important fact to society, and so often brought to the notice of the public by us, viz. the spontaneous origin of cholera, and its not possessing the property of being communicated directly or indirectly from the sick to those who attend them, or are near them. The two establishments mentioned, although adjoining, are completely separate as to officers, attendants, &c. There is a doorway for communication on particular occasions only, in the high wall dividing both houses. In each house there are males and females of different classes. The first case was that of a woman in the Red House, who, from her unfortunate state of mind, had been long confined within the walls, and in whose case there was no possibility of tracing the source of the disease to her communication with any other person labouring under it. When it was ascertained that the disease appeared in the Red House, Mr. Beverley, the medical gentleman in charge of the White House, felt himself bound to adopt the "precaution," as it is termed, of cutting off most perfectly all communication with the building in which the first cases occurred. Not only was the occasional communication of officers and attendants, through the door mentioned interdicted, but this gentleman had even the windows blocked up which overlooked the yard of the Red House, notwithstanding which, cholera appeared among the women under his charge; in a little time after among the men of the Red House, and lastly among the men of the White House. While this was going on to the extent mentioned, *not a single medical man who has been in contact with the cholera patients—not a single nurse or attendant of any kind in the hospital about the sick—no burier of the dead, &c. &c. has been attacked with the disease up to the present time, when only a patient or two are under treatment.* Here we must notice the curious physiological fact observed at this hospital, of the restoration of reason in the patients while under grave cholera symptoms. The liberality and gentleman-like conduct of the zealous medical men in charge of the Bethnal-green establishment, are calculated to advance the interests of science, and of humanity; but from the extreme secrecy observed in another lunatic establishment near the metropolis, in which the cholera has prevailed, we have no means of ascertaining whether the germs of the disease had been carried there in a snuff-box, or other convenient vehicle.

"Of one thing the public may rest perfectly assured, that, as to attendants on cholera patients, a similar result to that which has been just stated respecting Bethnal-green, took place in the Grenadier Guards in the Tower;—for, among the medical men in constant attendance on, or who paid occasional visits to the thirty cholera patients whose treatment has been lately referred to, in a medical journal, by Mr. Harrison, surgeon of this battalion, not one has been attacked with the disease:—of the military officers who paid the hospital visits of duty, or of kindness, towards their men, not one was attacked:—*of the several, (indeed we may say many,) men in constant attendance day and night,—rubbing the patients, &c., or on occasional duty only, and whose names may be obtained, not one has had cholera.* The same immunity of medical men, nurses, &c. in attendance on cholera patients, has been observed in another Battalion of the Grenadier Guards, in which cases have occurred occasionally since the 15th of January last, the day on which John Webb, of that regiment was, (as has been admitted by the gentlemen who treated him,) attacked with *the true cholera*; although, not being able to couple this guardsman's attack with a Sunderland ship, the case, like those of several others, was blinked by a *clique*—

"With that low cunning which in fools supplies,
And amply too, the place of being wise."

We could go on enumerating at the Aldgate Hospital, and at many other points,

the instances of the total exemption from the disease, of attendants on cholera patients. We could in private families quote the many instances of its not going beyond an individual case, besides those of which took place in the houses of Lady Anne Windham—of the Archbishop of Canterbury—of the Honourable Mrs. Smith—of the Honourable Mr. Scot—of Sir James Macdonald—of Lord Holland, &c. &c. We could show the perfect untruth of the tale about a person having taken cholera in consequence of having worn some of Lady Blanc's clothes, who died of that disease. Nobody can be fool enough to suppose that attendants on cholera patients should remain exempt from the disease, if they happen, in all respects, to be under similar circumstances with those who we see attacked without any communication with those labouring under the malady. If we have either dissipated persons, the outcasts of society, performing the office of nurses, or if we have but those wretched debilitated persons attempting to perform a duty which, in such a disease as cholera, would tire out four healthy persons, what, in either case, can be more probable than that such attendants will be attacked during the epidemic influence. If these things be considered fairly for one moment, and if, along with these things, it be considered that, according to any conceivable doctrine of chances or probabilities, we must, among many thousand events of a particular kind, expect a certain number of coincidences, which it would be utterly illogical to admit to be the *consequences* of certain assigned causes; and therefore, in the *few* instances which can be adduced of healthy, robust, and temperate persons being attacked with cholera, though not over-worked, while in attendance, it would be bad logic to assign that attack as produced by the attendance on the patient, when we see so many thousands attacked who *are not near* patients, and, on the other hand, the whole mass of attendants only attacked in their due proportion to the rest of society.

37. *Observations on the Malignant Cholera in England.*—REGINALD ORTON, Esq. the author of a valuable work on the cholera of India, has lately had an opportunity of observing the disease as it prevailed in the military cholera hospital, Regent street, Westminster. The disease here, exhibited he says all the very same singular characters that it did in India; indeed, he remarks, "its almost entire identity in all respects is very remarkable, considering the extreme difference of circumstances. I have not found the consecutive affections more frequent, more protracted, nor otherwise different from those in India, and as far as I can learn, there does not appear to have been generally in these islands that great prevalence of febrile sequelæ, which is described as occurring in Russia, and greatly altering the general aspect of the disease from that which it exhibited in India.

"The average daily number of new cases in Great Britain, which appear in the reports of the Central Board for two months back, is 530. The average of 'remaining cases' for the same period is 1515: a surprisingly small number in comparison with the great daily influx, showing that the cases in general have either died or recovered very rapidly; the average time of each case remaining on the reports, or under treatment, being less than three days. It is scarcely to be supposed that even the slight cases could get well in a much shorter time, and it appears, therefore, evident that there cannot have been any great proportion of the protracted fever cases, or rather, as I believe, inflammations, which are always more or less frequently met with. It was observed in Moscow, that the greatest number of deaths took place in the hot stage. I believe it will be found that by far the greater number in these islands, as well as in India, have died in the stage of collapse.

"The greater frequency of the premonitory diarrhœa and choleric, certainly appears to constitute a shade of difference, but I have long ago placed the fact on record, that 'the distinct attack of the disease was frequently preceded for several days by simple diarrhœa' in India, and pointed out the preva-

lence of the various other slight affections accompanying the epidemic, to which also the term *cholérine* has since been applied. It certainly appears that the *sub-susceptibility* to which these affections seem to be owing, exists in greater proportion in these countries than in India.

"I have almost invariably found, that the mere diarrhœa has existed here from half a day to four or five days before the setting in of the severe symptoms, as if the system was insusceptible of the graver forms of the disorder until the salts and serum of the blood were drained away by the continuance of that process. The transition to the second stage is generally rather sudden and well marked. Its most usual precursor, and, probably, immediate cause, is that sound sleep which generally takes place towards morning. The patient awakes from it with an urgent call to stool; vomiting supervenes, then spasms, and the sinking of the circulation, with more or less of discoloration of the surface, and the eleventh hour for treatment has arrived!

"It is a most providential circumstance that the disease usually affords us this salutary warning, but few are sufficiently aware of the facts, or heedful of the danger, to take advantage of it, and the question is far from being settled, as to the proper mode of treatment to be adopted by the medical practitioner when the disorder is brought to his notice in this stage. Is it to be met by 'energetic' measures, bleeding, acrid emetics, croton oil? The appearance of the dangerous symptoms so often immediately follows or accompanies the first fit of vomiting, that I have always been apprehensive of *developing* the disease by emetics, when perhaps the system was quietly overcoming it by its own energies. I cannot conceive them indicated by any sound pathological views, nor do they appear to have been attended by much success in practice. There is great danger of the mustard emetic being either wholly or partially retained, particularly in the collapse stage, and thus we are applying a sinapism to the inflamed mucous coat of the stomach. And with regard to bleeding, it is so frequently followed by vomiting, and that most formidable symptom the sinking of the pulse, that, although the evidence in its favour is so strong, I would not venture on its employment unless when particularly indicated by severe spasmodic pain in the intestines or stomach, plethora, or decided inflammation, and warranted by sufficient strength of the circulation and habit. But on these points it is impossible to lay down any satisfactory general rules. The late discovery of the effects of the venous injection in cholera, appears clearly to counter-indicate blood-letting. The action of purgatives, and particularly of croton oil, is to produce serous effusion into the intestines, one of the most prominent symptoms of the epidemic, and apparently a great cause of its severer affections. How, then, can their exhibition be recommended or considered safe? It is well known that saline purgatives have often developed the disease in India. A fatal case has lately come to my notice under the care of Mr. Jones in the Strand, where the second stage appeared to be distinctly induced by a dose of aloes and soap, which the patient had taken of his own accord.

"I conceive that opium is still the sheet-anchor in the treatment of cholera. I have so often seen it lay a restraining hand on the whole process, completely and permanently arrest the morbid action when it had fairly begun, and was even advancing with rapidity, that I am fully persuaded it has a truly specific power over the disease when exhibited in its earlier stages. In the advanced period, when the whole system is paralysed from the want of arterial blood, and the stock of vital fluid is reduced to a comparatively small quantity of a dark grumous residuum, utterly incapable of supporting life, it will, indeed, fail to produce the smallest good effect; but there appears to be no other which holds out any better hope, unless it be the admirable discovery of the injection of the blood-vessels.

"The intestines will almost always be sufficiently evacuated by the diarrhœa before the practitioner is called in, and any further purgation would appear to be directly and only injurious. If the disease is met in this stage, it is probable

that it may be almost always arrested by judicious and mild treatment; opium in doses from $\frac{1}{4}$ gr. to 1 gr. in substance or tincture, or an equivalent quantity of the opiate confection, with or without calomel, and repeated at intervals, as it is found necessary; strict confinement to bed, and the horizontal posture, warm drinks, as weak tea, ginger tea, or wine whey, and perhaps a little mulled port-wine highly spiced—an excellent medicine in cholera. I have usually found the choleric diarrhoea as easily checked by these remedies as similar disorder of the bowels arising from other causes. There is, indeed, always the danger that the purging will return on laying aside the remedies, and great attention is necessary to renew and keep up a slight degree of narcotism as long as its necessity may be indicated by the symptoms; but I have found in general that this disposition to relapse does not exist. After one or two doses of the medicine, sound sleep has been induced, attended with a remarkably warm perspiration, like the sweating stage of ague, after which bile has appeared more or less abundantly in the evacuations; and the rhythm, or series, or morbid action, being completed—the system having completely got through the attack,—its susceptibility to future impressions is thereby either destroyed or very much diminished.

“I have usually given calomel in doses of from two to ten grains in combination with the opium, and apparently with decided good effect. Calomel is well known to exhibit a direct soothing or sedative effect on the *primæ viæ*, and in various disorders I have found a dose of five grains of it given at night produce unusually sound sleep. In this way, therefore, it is probable that it is highly beneficial in cholera, and, less directly, by its specific power of promoting the secretions. But the mercurialization of the system is a severe remedy, which can seldom be necessary in the diarrhoea cases, and after the accession of the second stage, it is rarely practicable with sufficient rapidity. Neither are its beneficial effects at all evident; on the contrary, it has often been observed in India, that persons in the state of pyalism for other complaints were particularly liable to the disease.

“In the more advanced stages, I have ventured on a pretty free exhibition of the spirituous stimuli, occasionally in the form of mulled port-wine, but more generally in copious draughts of weak cold brandy and water, which are highly grateful from the thirst, and probably beneficial by affording the requisite dilution to the system. Ammonia is also a very valuable stimulus. Of the saline system of treatment I cannot offer an opinion, having tried Dr. Stevens’s draughts in only two cases, when I found them rejected repeatedly by the stomach. I have however seen very marked good effect in the collapse stage from large enemata, five or six pounds of warm water, with one or two ounces of common salt, and a few ounces of alcohol. I have generally found them retained for a considerable time, and partially absorbed. I have in several cases seen the coldness, blueness, and extreme debility of the circulation, (but not amounting to entire failure of the pulse at the wrist,) continue about two days, but by keeping up a gentle stimulation with alcohol, opium and ammonia. The powers of the system have at length effectually rallied and overcome the disease. Under the modes of treatment described above, the mortality at the Regent street Cholera Hospital has amounted only to one in eight of the cases admitted. Many of them certainly were far from being cases of the fully developed, or clearly-marked form of the disease; but it is evident that they must all have assumed its symptoms to a considerable degree, from the fact of their having been all sent thither by the medical officers of the corps to which they belonged.”—*Lancet*, Oct. 6th, 1832.

MISCELLANEOUS.

38. *Memoir on the Influence exercised by the Labours of the Physiological Physicians on French Medicine.* (Read to the Academy of Sciences.) By Professor